

What is claimed is:

1. A method of retrying reading or writing of data, comprising:
  - A. determining a required time period for performing a retrying type of reading or writing of the data; and
  - 5 B. terminating retrying of reading or writing of the data if the required time period is greater than a remaining retrying limitation time.
2. The method of claim 1, further comprising:
  - 10 starting to time down from the retrying limitation time after a request for reading or writing of the data is generated.
3. The method of claim 1, further comprising:
  - 15 determining whether an error has occurred during an initial reading or writing of the data or during a prior retry of reading or writing of the data; and
  - 15 performing steps A and B if said error has occurred.
4. The method of claim 1, further comprising:
  - 20 determining whether the data is a predetermined type of data; and
  - 50 performing steps A and B only if the data is the predetermined type of data.
5. The method of claim 4, wherein the predetermined type of data is A/V (audio or video) data.
6. The method of claim 4, further comprising the following steps when the data is not the predetermined type of data:
  - 25 determining a total count of retries for the reading or writing of the data;
  - 70 performing another retry if the total count of retries is not greater than a predetermined maximum number of retries; and
  - 30 terminating retrying of reading or writing of data if the total count of retries is greater than the predetermined maximum number of retries.
7. The method of claim 1, further comprising:
  - 85 determining the retrying type of reading or writing from a sequential order of retrying types as stored within a lookup table; and

5 determining the required time period for the retrying type from the lookup table.

8. The method of claim 1, further comprising:

10 performing a retry of reading or writing the data for the retrying type if the required time period is not greater than the remaining retrying limitation time.

15 9. The method of claim 1, wherein the data is read or written within a hard disc drive.

10 10. A method of reading or writing of data, comprising:

determining whether the data is a predetermined type of data; and

15 performing any retry of reading or writing of the data within a remaining retrying limitation time if the data is of the predetermined type of data.

11. The method of claim 10, further comprising:

20 performing a number of retries of reading or writing of the data that is not larger than a predetermined maximum number if the data is not of the predetermined type of data.

12. An apparatus for retrying reading or writing of data, comprising:

25 a required time selection portion for determining a required time period for performing a retrying type of reading or writing of the data; and

means for terminating retrying of reading or writing of the data if the required time period is greater than a remaining retrying limitation time.

13. The apparatus of claim 12, further comprising:

30 a timing unit for starting to time down from the retrying limitation time after a request for reading or writing of the data is generated.

14. The apparatus of claim 12, further comprising:

means for determining whether an error has occurred during an initial reading or writing of the data or during a prior retry of reading or writing of the data; and

means for performing any retry of reading or writing of the data when said error has occurred.

15. The apparatus of claim 12, further comprising:

5 a data identification unit for determining whether the data is a predetermined type of data; and

means for terminating retrying of reading or writing of the data if the required time period is greater than the remaining retrying limitation time only if the data is the predetermined type of data.

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16. The apparatus of claim 15, wherein the predetermined type of data is A/V (audio or video) data.

17. The apparatus of claim 15, further comprising:

15 a counting portion for determining a total count of retries of reading or writing of the data;

means for performing another retry if the total count of retries is not greater than a predetermined maximum number of retries when the data is not the predetermined type of data; and

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means for terminating retrying of reading or writing of data if the total count of retries is greater than the predetermined maximum number of retries when the data is not the predetermined type of data.

18. The apparatus of claim 12, further comprising:

25 a storage portion for storing a lookup table having a sequential order of retrying types used for determining the retrying type and the required time period for the retrying type.

19. The apparatus of claim 12, further comprising:

30 means for performing a retry of reading or writing the data for the retrying type if the required time period is not greater than the remaining retrying limitation time.

20. The apparatus of claim 12, wherein the data is read or written within a hard disc drive.

21. An apparatus for reading or writing of data, comprising:  
a data identification unit for determining whether the data is a predetermined  
type of data; and  
5 means for performing any retry of reading or writing of data within a remaining  
retrying limitation time if the data is of the predetermined type of data.

22. The apparatus of claim 21, further comprising:  
means for performing a number of retries of reading or writing of the data that  
10 is not larger than a predetermined maximum number if the data is not of the  
predetermined type of data.